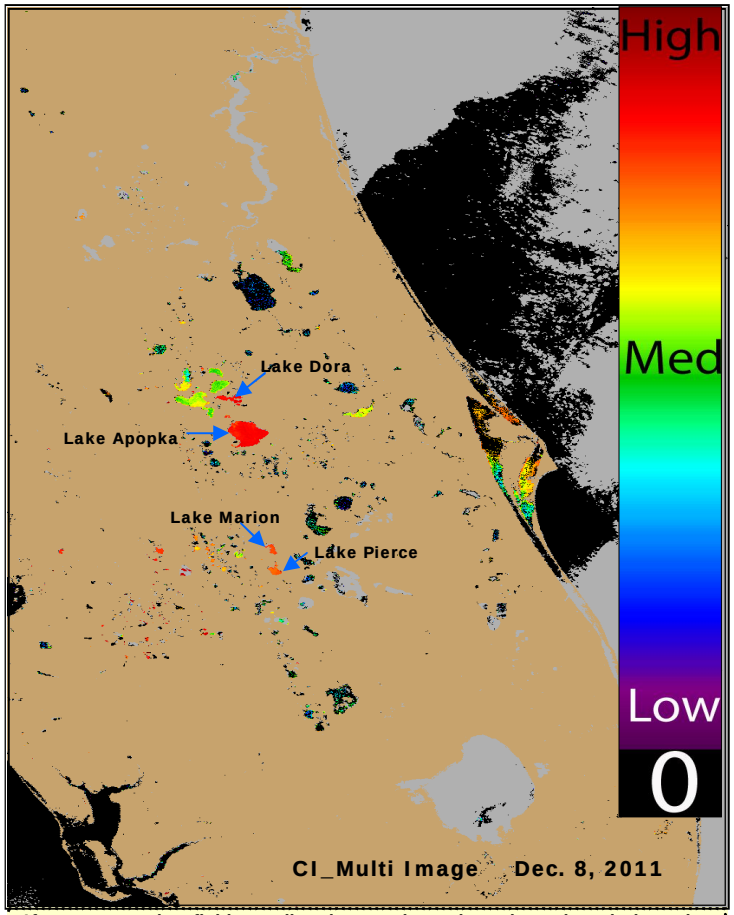
Experimental Cyanobacteria Health Bulletin: Dec. 8, 2011

To report an illness related to a marine toxin or algal bloom please contact the Florida Poison Information Center-Miami Aquatic Toxins Hotline at 1-888-232-8635.
For questions about the report: please contact Becky Lazensky, FL-DOH, at 352-955-1900. Images/data were obtained from Florida Water Management Districts, The National Oceanic and Atmospheric Administration (NOAA), NOAA National Climatic Data Centers and National Weather Centers. Support to produce this report was received through a NOAA/NASA Agreement (Number: NNH08ZDA001N)



If your agency has field sampling data on the regions shown in red, these data can be used to help validate the MERIS imagery. Contact Becky Lazensky at: 352-955-1900 to participate in future FDOH validation efforts.

The MERIS Satellite Images above display a cyanobacteria index generated with a Medium Resolution Imaging Spectrometer (MERIS) satellite provided by the European Space Agency & NOAA.

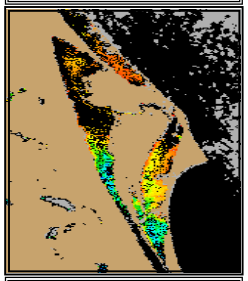
- Very low likelihood of a bloom
- May indicate clouds or missing data
- Low cyanobacteria concentrations
- Medium cyanobacteria concentrations
- Probable bloom or higher cyanobacteria concentrations

CyanoHabs Conditions Report: Dec. 8

- The areas in the Dec. 8th MERIS imagery which displayed elevated estimated cyanobacteria concentrations were in central Florida
- Lake Dora and Lake Apopka continued to display high estimated concentrations
- The Indian River Lagoon displayed elevated activity, most likely due to ongoing planktonic dinoflagellate blooms in the region
- Lake Marion and Lake Pierce both displayed medium to high estimated cyanobacteria concentrations

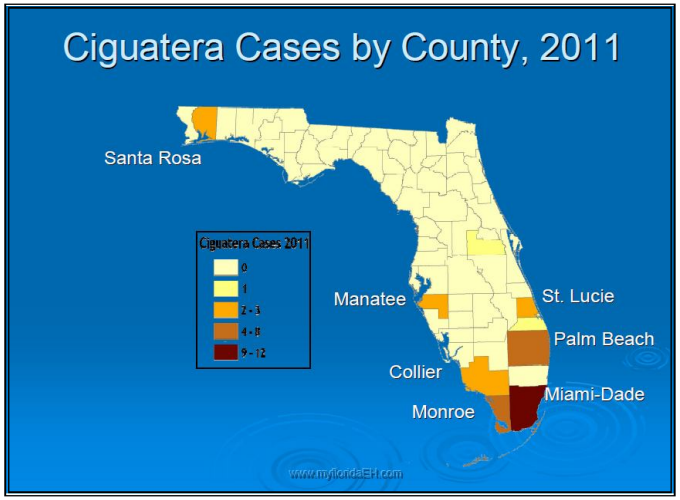
Lake Dora and Apopka

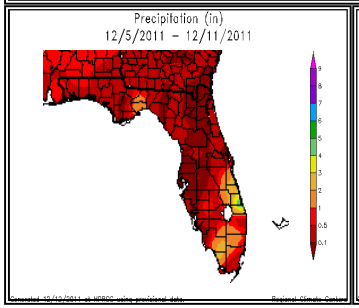
Indian River Lagoon

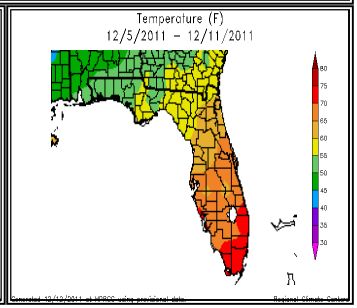


Lake Marion and Pierce

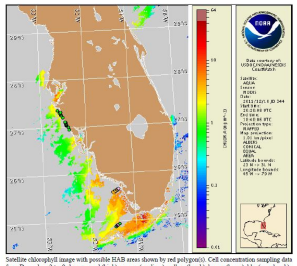
Aquatic Toxins Disease Prevention Program Update: 2011 Ciguatera Incidence, By Andy Reich, MS, MSPH







Non CyanoHABs & Health Report: Southwest FL *K. brevis* Bloom: Dec. 12, 2011

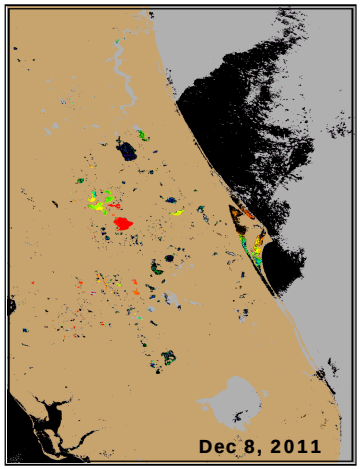


Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from December 2 to 9 shown as red (high), orange (medium), yellow (low 1), brown (low x), blue (very low 1), purple (very low x), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HAB-OFS bulletin inside.

Gulf of Mexico Harmful Algal Bloom Bulletin Region: SW Florida
Date: December 12, 2011
NOAA Ocean Service, NOAA Satellite and Information Service, NOAA National Weather Service
Due to technical issues, recent samples are not displayed above. See right for a summary of results

Confirmed Species: *Karenia brevis*
Bloom Boundary (FWRI/FWC): Southern Pine Island Sound/San Carlos Bay (Lee County); alongshore and offshore central and S. Lee, Collier, and N. Monroe counties
Change in Location: Recent sample reports from Mote Marine Laboratory (MML) confirm that the southern extent of the bloom has increased
Forecast: winds may increase the potential for impacts in the Pine Island Sound/San Carlos Bay and coastal Sanibel regions of Lee County over the next few days and decrease the potential for impacts alongshore southern Lee, Collier, and northern Monroe counties. Southerly transport of the bloom is possible through Wednesday.
Fish kills and respiratory symptoms were reported in the bloom region- (FWRI/FWC)
To Report a Fish Kill: Call the FWRI/FWC Fish Kill Hotline at 1-800-636-0511
Visit FWRI/FWC for Updates: http://myfwc.com/research/redtide/events/status/

Interpreting Medium Resolution Imaging Spectrometer Satellite Imagery



- The medium resolution imaging spectrometer (MERIS) is located on the Envisat satellite deployed by the European Space Agency.
- The cyanobacterial index algorithm shown in this report is designed to identify high biomass algal blooms caused by cyanobacteria. However, the current algorithm tends to have false positives, so other blooms may be "flagged". NOAA is currently testing new algorithms that are more specific to cyanobacteria.
- Data can be used to estimate near surface cyanobacteria concentrations which are an indication that algal blooms may be present.
- The mathematical algorithms used to generate the satellite images can vary, resulting in some models having a higher likelihood of detecting surface blooms.
- While patches of red or warm colors may indicate a bloom, these data have not been verified in most cases using ground-truth methods. Data collected by the satellite is considered experimental.
- Only portions of Florida are in the satellite's current coverage area.
- Several environmental factors may affect how results can be interpreted. For example, areas with abundant aquatic plant vegetation may present with a high cyanobacteria index on the color spectrum, resulting in a false positive bloom reading.
- The satellite identifies the biomass near the surface (in the upper few feet of water). As a result, it may underestimate the total biomass for blooms that are mixed or dispersed through the water column. Turbidity does not otherwise influence the algorithms. The satellite imagery does not display the species of algae present.
- Cloud coverage can obscure imagery and create patches or gray areas on map and obscure bloom detection.
- Weather conditions can impact the duration and location of blooms and the satellite imagery shown in this report may no longer be relevant. Images represent the last image taken with a realization that blooms may have moved, dissipated or intensified.

To review HABs satellite reports in the Gulf of Mexico and marine waters visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive at: http://tidesandcurrents.noaa.gov/hab/bulletins.html

For Individual Weather Station Data Visit:
http://www.sercc.com/climateinfo/historical historical_fl.html

Questions about the report or suggestions: You can contact
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